Sculptor Gutzon Borglum was very concerned with the effects of light on the memorial. He spent many hours studying the different shadows that were produced by the sun and made many adjustments so the best viewing could be achieved. His intention was to achieve optimal viewing during the daylight hours.

Things changed in 1939 during the Roosevelt figure dedication. During that dedication many different artificial ways of lighting the memorial were tried. The techniques ranged from shooting off flares to aerial bomb bursts and the use of searchlights. None of these were very successful.

In April 0f 1948, Superintendent J. Estes Suter attended a meeting at Weaver AFB (now Ellsworth Air Force Base) regarding a way to light the memorial by searchlights.

Time was running short because in May there was going to be a Rapid City Junior Chamber of Commerce celebration and the sponsors wanted the memorial lit.

During the week of May 16 - 23 three giant army searchlights lit the memorial from a distance of 3 - 4 miles away. These lights were stationed at the first pigtail bridge, Iron Mountain and the last one at Keystone. In order to maintain a communication link between all the lights a State Patrol car was positioned by each light and one at the memorial headquarters.

The combined power of all three lights equaled 1-billion candle power. The lighting was successful and they were turned on May 16 and remained on during the whole week for the celebration.

The lighting success led to a brainstorming effort to find a more permanent solution to lighting the memorial.

In December of 1948, the superintendent and three engineers form the regional office in Omaha, NE, met with the Black Hill Power & Light Company to discuss a plan to light the memorial.

By August of 1949, Black Hills Power and Light had completed installing a power line from Keystone to Mount Rushmore and the construction of power distribution boxes began.

The power system was finished and tested by November of 1949. The lighting was a little disappointing there were many unwanted shadows and not enough shadows for contrast at other points. Many at the time thought the lighting would improve when all the lights were properly focused.

Two banks of lights, each containing 27 Crouse-Hinds and Westinghouse searchlights were located southeast of the memorial on Doane Mountain near the concession building. Each of the 54 searchlights were rated at 1,500 watts and produced a combined total of 81,000 watts, after all

the focusing was completed in December, it was determined that additional lights were needed for better results.

During April a studied was conducted and it was determined that 2 more searchlights were needed to improve the lighting of the memorial. The efforts were partly successful, but again it was determined that an additional bank of 8-10 lights were really needed.

Adjustments to searchlights and the previously installed lights continued throughout the summer of 1950 and on June 25th a ceremony was held dedicating the new lighting system. Nearly 5,000 people attended the ceremony, which featured an address by Columnist Drew Pearson.

Shortly thereafter, from August 1 through Labor Day lighting programs were held on a regular schedule from 8:00 PM to 10:00 PM.

By mid-February of 1951, the additional light bank was completed and tested. This third bank of lights consisted of 8 searchlights (1,000 watts each) and it was located to the east of the memorial. The three banks of lights now totaled 62 lights and equaled 89,000 watts.

As technology progressed a new upgrading of lights took place in 1990 and then again in 1998. Today there are 32 lights that illuminate the memorial. The lights are a combination of Metal Halide and High Pressure Sodium and they all equal 18,800 watts.

Update December 23, 2014, Musco Lighting Donates an Illuminating Gift

KEYSTONE, SD: Musco Lighting, a manufacturer of design and sports-lighting systems in Oskaloosa, Iowa, has generously donated a new lighting system to illuminate Mount Rushmore.

Throughout the year Joe Crookham, President of Musco Lighting, and the Musco Special Projects Team have been meeting with staff at Mount Rushmore National Memorial designing, developing, installing and fine tuning a new energy efficient lighting system for the sculpture.

The new system consists of 39 fixtures with 20 light emitting diodes, LEDs, per fixture and 10 fixtures with 84 LEDs for a total of over 1,600 directional LEDs. Each LED is individually focused.

"We are painting with light," observed Joe Crookham. The new lights use 2.34 kilowatts per hour compared to the old lighting system at 24.6 kilowatts per hour resulting in an anticipated energy savings of 90%.

Musco is providing an additional savings with a ten year warranty on parts and labor. According to Jim Berns, Manager of Special Projects Engineering, reducing energy consumption by over 90% will result in a similar reduction in CO_2 emissions.